

HETEROBASIDION ANNOSUM MICELIUM CULTIVATION IN THE PURE CULTURE

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Introduction. The root and stem rot etiologic agent (*Heterobasidion annosum*, *Fomitopsis annosa*) is a xylotrophic basidiial fungus from the group of aphyllorphoroid hymenomycetes. It affects conifers (spruce, pine), as well as some deciduous (birch, alder). The root rot became a world problem, the disease covered huge areas of coniferous plantations, that causes great damage to forestry. Sources of infection are diverse - basidiospores, conidiospores, fungus mycelium. The pathogen distribution is affected by soil category and planting density. The search for reliable means to root rot control is one of the important problem of forestry. The main methods of root rot preventing and control are various forestry measures for the sustainable plantations cultivation (selective sanitary felling, the mixed populations formation; the use of antiseptics for the stumps treatment or removal; the introduction of chemicals into the soil; biological methods of infection control etc.).

Aim. Selection of optimal nutrient media and cultivation conditions for obtaining a pure culture and accumulation of *H. annosum* mycelium.

Materials and methods. To obtain the *H. annosum* mycelium, the conventional culture-morphological and physico-chemical methods were used. The fungus pure culture was obtained from basidiomes, which were previously purified from contamination by 3% H₂O₂ and 70° ethanol, cut into 0.7 x 0.7 cm fragments and transferred to the nutrient medium (Czapek's, wort and Sabouraut agar) surface. Primary isolations were incubated in the dark at (23-25)°C, subcultivation was carried out at (16-20)°C.

Results. In primary platings on the semisynthetic Czapek's medium *H. annosum* mycelium grew less intensively than in other media. Also, the mold fungi intensive growth was observed. The mycelium grew more intensively in solid and liquid wort nutrient media (6° Balling degree). It was found that *H. annosum* isolation and biomass accumulation can be carried out at (16-20)°C on standard Sabouraut medium. Growth of fungus on natural substrates was more intensive on wood and bark of pine than on birch materials.

Conclusion. Studies of phytopathogenic fungus *H. annosum* in the laboratory, selection of optimal parameters for cultivation and biomass accumulation are necessary for obtaining new knowledge that will help to improve available and to develop new root rot preventing and control measures.